THE SOURCE

NEWSLETTER OF THE NHDES DRINKING WATER SOURCE PROTECTION PROGRAM
ON THE WEB AT WWW.DES.NH.GOV/DWSPP

FALL 2004

Nashua River Group Wins $770,000 Federal Grant

A major federal grant will enable several New Hampshire and Massachusetts communities to try new approaches to land conservation over the next three years. Under U.S. EPA's Targeted Watersheds grant program, $770,000 will go to a consortium of not-for-profit organizations led by the Nashua River Watershed Association. The project will focus on resisting development pressures and keeping land forested in the Squannacook-Nissitissit sub-basin of the Nashua River watershed, where rapid conversion of forests and farms for suburban development threatens water quality. The Squannacook and Nissitissit rivers flow south into Massachusetts, where they join with the Nashua River, which flows north to join the Merrimack River in Nashua. The project area encompasses several New Hampshire towns including Mason, Brookline, large portions of Hollis and Greenville, and smaller portions of New Ipswich, Milford, and Wilton.

The Nashua River project was one of only fourteen watersheds selected for one of the coveted grants. The watershed is still largely rural, but is facing mounting pressures from development.

Wellhead Protection Areas in the Squannacook-Nissitissit Sub-Basin

A bi-state nomination proposed by the Nashua River Watershed Association, and supported both by New Hampshire Governor Benson and Massachusetts Governor Romney, builds on state and EPA priority work to protect critical waterways. Through a prior grant from EPA, the Squannacook-Nissitissit sub-basin was selected as one of four national pilot studies to demonstrate watershed-based efforts at source protection. An in-depth watershed management plan was developed for the sub-basin through this pilot.

The Squannacook-Nissitissit sub-basin includes 23 public water systems in New Hampshire and 21 in Massachusetts, all depending on groundwater sources in bedrock and stratified-drift aquifers. In many ways, the sub-basin exemplifies the source protection issues facing much of New Hampshire. Forests, wetlands, and water comprise 81 percent of the sub-basin, developed and cleared land 13 percent, and agricultural uses 6 percent. However, due to its proximity to metropolitan Boston and Nashua, the area is under severe development pressure. Brookline, for example, is projected to grow 17 percent between 2001 and 2010, Hollis by 14 percent.

The large grant award underscores the importance of working with watershed organizations and multiple communities on a regional basis. The project partners assembled a group of 52 stakeholders who have pledged approximately $400,000 of in-kind match.

The goal of the federal Targeted Watershed grant program (formerly known as the Water-

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Spotlight on ... Plaistow

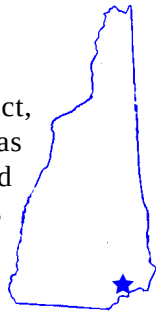
By Tom Irwin, Staff Attorney, Conservation Law Foundation

In the summer of 2001, residents in Plaistow received a wake-up call when drought conditions threatened the viability of many local wells. Plaistow's situation seemed particularly grave because of its exclusive reliance on groundwater. Fortunately, the town's conservation commission has recognized the value of its groundwater resources for some time, working with the Northeast Rural Water Association to conduct public outreach and other strategies aimed at protecting the quality of its groundwater, and pursuing a GIS-mapping study of its stormwater drainage infrastructure.

Recently, working with the Conservation Law Foundation (CLF) under a DES Local Source Water Protection Grant, the town completed a review of its land use regulations to identify ways to protect the sustainability, in terms of both quality and quantity, of its groundwater resources. The process involved several public meetings of the conservation commission and interested stakeholders, and culminated in July in a final report of CLF's recommendations to representatives of Plaistow's planning board, zoning board of adjustment, board of selectmen, conservation commission and town manager.

On the issue of groundwater quality, the report focuses on improving Plaistow's existing aquifer protection district regulations. Using DES' *Model Groundwater Protection Ordinance*, as well as regulatory approaches under consideration in Belmont, the report recommends that Plaistow expand its list of land use activities prohibited in its aquifer protection district and adopt performance standards for non-residential uses allowed within the district. Because Plaistow has experienced problems with septic failures at several large commercial retailers, the report also recommends approaches to ensure heightened awareness among users of those systems to prevent their misuse and future problems.

Addressing groundwater quantity, the report identifies strategies to protect groundwater recharge by promoting development patterns that minimize impervious surface and by better managing stormwater. CLF recommended that the town revisit its zoning ordinance with an eye toward promoting more compact, denser development in the areas where it most desires growth, and decreasing densities in other areas to prevent "two-acre sprawl" from consuming much of the town. It also identified numerous zoning requirements and design standards that could be changed to reduce impervious surfaces associated with parking lots, roads, and subdivisions, as well as opportunities to encourage low-impact-development strategies that promote appropriate groundwater infiltration. Finally, the report addresses another issue of growing concern across the region regarding groundwater quantity, the amount of water consumed for large-lot, suburban lawn-watering, by identifying a number of local regulatory alternatives to reducing water consumption associated with in-ground irrigation systems.



Overall, the report presented numerous approaches and strategies for Plaistow to consider and implement in ongoing efforts to protect the community's valuable groundwater resources. For more information on this project, please contact Tom Irwin, CLF, at 225-3060 or Tim Moore, Plaistow Conservation Commission, at 382-5200.

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Putting Your Source Assessment Results To Work For You

A series exploring ways that assessment results can be used to focus your protection efforts.

Neighborhood Watch...What's Going On In Your Sanitary Protective Radius?

Every public water supplier should know what is within their sanitary protective radius (SPR). It's the first line of defense against accidental contamination. An SPR is a 75 - 400 foot radius around a public drinking water supply well which, under current rules, must be controlled by the water supplier through ownership or easement. The extent of the SPR depends on the maximum daily amount of water withdrawn from the well. Knowing the extent of the SPR, and making sure only activities that are both directly related to your water system and non-threatening to the water quality occur within the radius are keys to keeping your well(s) protected.

According to DES's Drinking Water Source Assessments, 44 percent of community systems and 80 percent of non-transient, non-community systems had at least one SPR deficiency. Common radius deficiencies include the presence of septic systems, buildings, roads, fuel tanks, power lines, parking lots, dumpsters, hazardous materials, and railroads. Such features are potential threats to your water supply because they can leak or otherwise introduce chemicals and contaminants to the groundwater.

Water suppliers should regularly inspect their SPR to be sure the water supply is not being threatened. If you have SPR deficiencies, the best remedy is to move them out of your SPR. In instances where this is not possible, preventative management measures should be taken. These measures include using best management practices (BMPs) and educating those who live or work in the SPR about the drinking water supply. Performing BMP surveys can help ensure that the items or activities of concern in the SPR are working properly and that BMPs are being used wherever applicable. For instance, if there is a septic system within your SPR, the system should be inspected every year and pumped when needed. Also, household hazardous chemicals should never be dumped down the drain. Better BMPs include secondary containment for fuel tanks and drainage modifications to direct runoff away from the SPR.

For information about grants to help put these suggestions into practice, please visit our website at www.des.nh.gov/DWSPP/grants.htm or contact Paul Susca at psusca@des.state.nh.us or 271-7061.

DES Says Goodbye To Project WET Educator

The Drinking Water Source Protection Program recently bid farewell to our colleague, Nicole Clegg. Nicole has left state service in order to share her love of science and water education with high school students in Epping, where she began teaching this fall. Her vivacity and dedication to water education will be missed by DES staff, and the many teachers, students, and others she worked with as coordinator of NH Project WET (Water Education for Teachers).

Nicole began with DES's Drinking Water Source Protection Program in 1997 and was instrumental in launching Project WET in the state. Thanks to her dedication to this program, over 950 New Hampshire educators have received training and classroom materials to assist them in teaching their students about our water resources. During her tenure here at DES, Nicole was also responsible for coordinating 12 water festivals, involving more than 7,500 students in learning about New Hampshire's water resources, their protection, and conservation. In addition to her youth education work, Nicole also developed DES's source protection website and was responsible for the publication of two newsletters, *The Source* and *Project WEB*, an environmental education newsletter that reaches over 3,000 New Hampshire educators.

Questions concerning Project WET and youth water education should now be directed to Jessica Brock at jbrock@des.state.nh.us or 271-3303.

PROJECT WET
Water Education for Teachers

Grant & Security Reminders

Applications for the 2005 Local Source Water Protection Grants are due by November 30, 2004. This grant program is available to develop and implement programs to protect existing sources of drinking water. Up to $15,000 can be awarded for projects such as the development of protection ordinances, groundwater reclassification, source security measures (i.e. fences, gates, etc.), and education. Applications are available on the web at www.des.nh.gov/dwspp/grants.htm or by contacting Jessica Brock at 271-3303. For specific questions regarding grant proposals contact Sarah Pillsbury at 271-1168 or Paul Susca at 271-7061.

Calling all systems serving 3,300 people or more! Now that you have completed and submitted a vulnerability assessment (VA) to EPA, remember that emergency plans (EP) are now due to EPA within six months of the VA submittal and to DES by December 31, 2004. Please note that EPA only needs to receive certification that an EP was completed; however, you must incorporate the results of your system's VA into the plan. A full copy of your EP does need to be sent to DES, but we suggest leaving out sensitive VA information when doing so. Several different EP guidance documents are available, including the EPA Emergency Response Plan Guidance, to assist you in completing your plan. These resources can be found on the water system security webpage at www.des.nh.gov/wseb.

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shed Initiative grant program) is to build on the successes of public-private partnerships. When this issue of *The Source* went to press in August, EPA was expected to issue the request for proposals for next year's grants in the fall (pending congressional action on the federal budget), with proposals due within a couple of months. While the program has been rather competitive, with one in nine of the 2004 proposals receiving funding, the current federal budget proposal includes a 66 percent increase for the Targeted Watersheds program. More information about the program is available at www.epa.gov/owow/watershed/initiative/ or by calling Carol Peterson at (202) 566-1304. For information on other federal watershed grant opportunities, visit www.epa.gov/watershedfunding.

Upcoming Conferences

Two forums this fall promise to be of value to water suppliers and others interested in source protection and groundwater protection.

The first, scheduled for October 27 in Boxborough, Mass., is New England Water Works Association's annual Water Resources Forum. This year's theme is taking the long view on preserving yield and managing growth in demand. The forum emphasizes the impact that land use changes have on source yield as well as demand, presents several management tools, and showcases examples of water suppliers working cooperatively with developers to minimize the impacts of development. For more information, call (508) 893-7979 or visit www.newwa.org/conferences_meetings/symposiums.php.

The second is DES's annual Watershed Conference on Saturday, November 13 in Concord. Of particular interest to local officials and individuals interested in water supply is a two-hour workshop on groundwater, focusing on the state and local roles in preventing contamination and managing withdrawals. Other sessions include stream buffers, watershed management, organizational development for watershed groups, and invasive species. For more information, call 271-8801 or visit www.des.nh.gov/rivers/2004Conference.

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